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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,662	03/20/2006	Helmut Eggers	3926.252	4641
41288	7590	05/21/2010	EXAMINER	
PATENT CENTRAL LLC			GILES, NICHOLAS G	
Stephan A. Pendorf			ART UNIT	
1401 Hollywood Boulevard			PAPER NUMBER	
Hollywood, FL 33020			2622	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/572,662

Applicant(s)

EGGERS ET AL.

Examiner

NICHOLAS G. GILES

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No(s)/Mail Date ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims **4-7 and 11-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim **4** recites the limitations "the reproduction system", "the display image", "each pixel", and "the image signal". There is insufficient antecedent basis for this limitation in the claim.

Claims **5-7** depend on claim 4 and therefore are rejected.

4. Claim **5** recites the limitations "the image signal". There is insufficient antecedent basis for this limitation in the claim.

Claims **6 and 7** depend on claim 5 and therefore are rejected.

5. Claim **11** recites "the two cameras". There is insufficient antecedent basis for this limitation in the claim.

Claims **12-14** depend on claim 11 and therefore are rejected.

6. Claim **12** recites "the two cameras". There is insufficient antecedent basis for this limitation in the claim.

Claims **13 and 14** depend on claim 12 and therefore are rejected.

Claim Objections

7. Claims **1, 5, 9, 10, 11, and 14** are objected to because of the following informalities:

In claim **1** line 6 "camera" should be "cameras" A similar correction should be made for claims **9 and 11**.

In claim **5** line 1 "device" should be "apparatus"

In claim **10** line 1 "it" should be "the vehicle further".

In claim **14** line 3 "this" should be "the".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims **1-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (U.S. Patent No. 6,150,930) in view of Asayama (U.S. Patent No. 5,424,952).

Regarding claim **1**, Cooper discloses:

An apparatus having a camera, sensitive in the visible spectral region and sensitive in the infrared spectral region (4:38-65).

Cooper is silent with regards to using two cameras arranged at a defined spacing from one another and a triangulation device that calculates a distance of an object to

the cameras from the defined spacing and the images recorded by the two cameras. Asayama discloses this in 3:61-4:36 and Fig. 1 where image sensors 3 and 4 are used by microcomputer 10 with known focal distance "f", known base line distance between the lens 1 and 2 of sensors 3 and 4 "L", number of pixel shifts "n" required to obtain the best matched image between images from sensors 3 and 4, and pixel pitch "P" to obtain distance "R". As can be seen in 4:40-44 and 6:3-18 of Asayama this is advantageous in that an alarm can be activated if another vehicle gets too close to the subject vehicle and a collision may occur. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Cooper include using two cameras arranged at a defined spacing from one another and a triangulation device that calculates a distance of an object to the cameras from the defined spacing and the images recorded by the two cameras.

Regarding claim 2, see the rejection of claim 1 and note that Cooper further discloses:

Reproduction system with a display screen (display 60) for electronic production and display of a display image, constructed from a plurality of pixels (4:8-16), of the scene, the reproduction system deriving the display image from image signals that are supplied by the camera (5:13-19).

Regarding claim 3, see the rejection of claim 1 and note that Cooper further discloses color camera signals in 4:65-5:2.

Regarding claim 4, see the rejection of claim 1 and note that Cooper further discloses:

Reproduction system comprises a combination device for producing a combined video signal (encoder 58) and derives the display image from the combined video signal (composite video), the combined video signal comprising for each pixel an item of luminance information derived from the infrared image signal of the camera and an item of color information derived from the color image signal of the camera (5:5-10).

Regarding claim 5, see the rejection of claim 4 and note that Cooper further discloses:

Camera supplies a multi-component color video signal as the image signal (Y, R-Y, and B-Y), and in that one of the components is an item of luminance information for each pixel (Y, 4:65-5:2, 5:50-65).

Regarding claim 6, see the rejection of claim 5 and note that Cooper further discloses:

Camera comprises sensors that are respectively sensitive in a red, a green or a blue wavelength region (5:50-63), and a transformation matrix (matrix 56) that transforms signals supplied by the sensors into the multi-component color video signal (5:50-63).

Regarding claim 7, see the rejection of claim 6 and note that Cooper is silent with regards to a back transformational matrix transforming the multi-component color video signal into a second color video signal representing red, green, and blue for display.

Official Notice is taken that it was well known in the art at the time the invention was made to transform a video signal into a second color video signal using a transformational matrix. This is advantageous in that a display using component video input can display an image when the image is initially in an incompatible format. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Cooper include a back transformational matrix transforming the multi-component color video signal into a second color video signal representing red, green, and blue for display.

Regarding claim **8**, see the rejection of claim 2 and note that Cooper further discloses:

Reproduction system produces a spatial image of the object (5:14-18).

Regarding claim **9**, see the rejection of claim 1 and note that the apparatus of Cooper is on an vehicle (3:6-24).

Regarding claim **10** see the rejection of claim 9 and note that in the rejection of claim 1 it was shown that Asayama discloses using the distance R calculated with anti-collision apparatus (alarm device 15) in 6:3-18.

Regarding claim **11**, see the rejection of claim 1.

Regarding claim **12**, see the rejection of claim 11 and note that Asayama further discloses:

Detecting the object in the two images by finding common features in the images (matching window image 16 of one image sensor to the other image sensor, 3:61-4:11).

As can be seen in 4:23-36 of Asayama this is advantageous in that multiple vehicles can be tracked. For this reason it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Cooper include detecting the object in the two images by finding common features in the images.

Regarding claim 13, see the rejection of claim 12 and note that Cooper further discloses the image recorded by the camera being a multi-component color video signal (Y, R-Y, B-Y, 5:50-65).

Note that the finding common features and comparing of images has already been shown in the rejection of claim 12.

Regarding claim 14, see the rejection of claim 12 and note that Cooper uses luminance values shown in 5:50-65.

Note that comparing and finding common features has already been shown in the rejection of claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS G. GILES whose telephone number is (571) 272-2824. The examiner can normally be reached on Monday through Friday from 7:00am to 3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas G Giles/
Examiner, Art Unit 2622